

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): An information processing system comprising:

a first processor having a first local memory;

a second processor having a second local memory;

a third processor having a third local memory;

a shared memory shared by the first to third processors, the shared memory and the first to third local memories being mapped in a real address space;

means for mapping one of the second local memory and the third local memory in part of an effective address space of a first thread ~~to be~~ executed by the first processor, said one of the second local memory and the third local memory being the local memory of a corresponding one of the second processor and the third processor, which executes a second thread interacting with the first thread, the second thread holding thread context including contents of said one of the second local memory and the third local memory, the first thread accessing said one of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread; and

means for ~~changing mapping the other of the second local memory and the third local memory a local memory to be mapped in said~~ changing mapping the other of the second local memory and the third local memory ~~a local memory to be mapped in said~~ part of the effective address space of the first thread ~~from instead of~~ said one of the second local memory and the third local memory ~~to the other of the second local memory and the third local memory~~ when a processor that executes the second thread is changed from said one of the second processor and the third processor to the other of the second processor and the third processor, the first thread accessing the other of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread.

2. (Currently Amended): The information processing system according to claim 1, further comprising:

~~a shared memory shared by the first processor, the second processor, and the third processor;~~

means for storing contents of said one of the second local memory and the third local memory in a memory area on the shared memory when the second thread stops to run; and

means for changing mapping the memory area on the shared memory ~~a local memory to be mapped in said part of the effective address space of the first thread from instead of said one of the second local memory and the third local memory to the memory area on the shared memory, the first thread accessing the memory area on the shared memory via said part of the effective address space of the first thread to interact with the second thread.~~

3. (Currently Amended): The information processing system according to claim 2, further comprising:

means for restoring contents of the memory area on the shared memory to said one of the second local memory and the third local memory when the second thread is resumed by said one of the second processor and the third processor; and

means for changing mapping said one of the second local memory and the third local memory ~~a local memory to be mapped in said part of the effective address space of the first thread from instead of the memory area on the shared memory to said one of the second local memory and the third local memory.~~

4. (Currently Amended): The information processing system according to claim 2, further comprising:

means for restoring contents of the memory area on the shared memory to the other of the second local memory and the third local memory when the second thread is resumed by the other of the second processor and the third processor; and

means for ~~changing mapping the other of the second local memory and the third local memory a local memory to be mapped in said~~ part of the effective address space of the first thread ~~from instead of the memory area on the shared memory to the other of the second local memory and the third local memory.~~

5. (Currently Amended): A method of managing a local memory used for communication between a plurality of threads, the threads being executed by an information processing system including a first processor having a first local memory, a second processor having a second local memory, ~~and~~ a third processor having a third local memory, and a shared memory shared by the first to third processors, the shared memory and the first to third local memories being mapped in a real address space, the method comprising:

mapping one of the second local memory and the third local memory in part of an effective address space of a first thread ~~to be executed by the first processor~~, said one of the second local memory and the third local memory being the local memory of a corresponding one of the second processor and the third processor, which executes a second thread interacting with the first thread, the second thread holding thread context including contents of said one of the second local memory and the third local memory, the first thread accessing said one of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread; and

~~changing mapping the other of the second local memory and the third local memory a local memory to be mapped in said~~ part of the effective address space of the first thread ~~from instead of said one of the second local memory and the third local memory to the other of the~~

~~second local memory and the third local memory~~ when a processor that executes the second thread is changed from said one of the second processor and the third processor to the other of the second processor and the third processor, the first thread accessing the other of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread.

6. (Currently Amended): The method according to claim 5, further comprising:  
storing contents of said one of the second local memory and the third local memory in a memory area on a the shared memory, which is shared by the first processor, the second processor, and the third processor, when the second thread stops to run; and  
~~changing mapping the memory area on the shared memory a local memory to be mapped in~~ said part of the effective address space of the first thread from instead of said one of the second local memory and the third local memory ~~to the memory area on the shared memory,~~ the first thread accessing the memory area on the shared memory via said part of the effective address space of the first thread to interact with the second thread.

7. (Currently Amended): The method according to claim 6, further comprising:  
restoring contents of the memory area on the shared memory to said one of the second local memory and the third local memory, when the second thread is resumed by said one of the second processor and the third processor; and  
~~changing mapping said one of the second local memory and the third local memory a local memory to be mapped in~~ said part of the effective address space of the first thread from instead of the memory area on the shared memory ~~to said one of the second local memory and the third local memory.~~

8. (Currently Amended): The method according to claim 6, further comprising:  
restoring contents of the memory area on the shared memory to the other of the second local memory and the third local memory, when the second thread is resumed by the other of the second processor and the third processor; and  
~~changing mapping the other of the second local memory and the third local memory a local memory to be mapped in said part of the effective address space of the first thread from instead of the memory area on the shared memory to the other of the second local memory and the third local memory.~~

9. (Currently Amended): A program stored in computer-readable media, which causes a computer to manage a local memory used for communication between a plurality of threads, the computer including a first processor having a first local memory, a second processor having a second local memory, ~~and a third processor having a third local memory,~~ and a shared memory shared by the first to third processors, the shared memory and the first to third local memories being mapped in a real address space, the program comprising:

causing the computer to map one of the second local memory and the third local memory in part of an effective address space of a first thread ~~to be executed by the first processor,~~ said one of the second local memory and the third local memory being the local memory of a corresponding one of the second processor and the third processor, which executes a second thread interacting with the first thread, the second thread holding thread context including contents of said one of the second local memory and the third local memory, the first thread accessing said one of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread; and

causing the computer to ~~change-map the other of the second local memory and the third local memory a local memory to be mapped in~~ said part of the effective address space of the first thread ~~from~~ instead of said one of the second local memory and the third local memory ~~to the other of the second local memory and the third local memory~~ when a processor that executes the second thread is changed from said one of the second processor and the third processor to the other of the second processor and the third processor, the first thread accessing the other of the second local memory and the third local memory via said part of the effective address space of the first thread to interact with the second thread.

10. (Currently Amended): The program according to claim 9, further comprising:

causing the computer to store contents of said one of the second local memory and the third local memory in a memory area on ~~a~~ the shared memory, ~~which is shared by the first processor, the second processor, and the third processor,~~ when the second thread stops to run; and

causing the computer to ~~change-map the memory area on the shared memory a local memory to be mapped in~~ said part of the effective address space of the first thread ~~from~~ instead of said one of the second local memory and the third local memory ~~to the memory area on the shared memory,~~ the first thread accessing the memory area on the shared memory via said part of the effective address space of the first thread to interact with the second thread.

11. (Currently Amended): The program according to claim 9, further comprising:

causing the computer to restore contents of the memory area on the shared memory to said one of the second local memory and the third local memory, when the second thread is resumed by said one of the second processor and the third processor; and

causing the computer to ~~change-map~~ said one of the second local memory and the third local memory ~~a local memory to be mapped in~~ said part of the effective address space of the first thread ~~from~~ instead of the memory area on the shared memory ~~to said one of the second local memory and the third local memory.~~

12. (Currently Amended): The program according to claim 9, further comprising:

causing the computer to restore contents of the memory area on the shared memory to the other of the second local memory and the third local memory, when the second thread is resumed by the other of the second processor and the third processor; and

causing the computer to ~~change-map~~ the other of the second local memory and the third local memory ~~a local memory to be mapped in~~ said part of the effective address space of the first thread ~~from~~ instead of the memory area on the shared memory ~~to the other of the second local memory and the third local memory.~~